

**ASX Announcement** 

1 November 2017

ACN: 612 531 389

T: 08 6489 1600

F: 08 6489 1601

E: investors@tmtlimited.com.au

Suite 9, 330 Churchill Avenue,

Subiaco WA 6008

#### www.tmtlimited.com.au

#### **Directors**

Michael Fry: **Chairman** 

Ian Prentice:

**Executive Director** 

Sonu Cheema:

**Director and Company Secretary** 

#### **Issued Capital**

22,600,001 ("TMT") Fully Paid Ordinary Shares

12,500,000 Fully Paid Ordinary Shares classified as restricted securities

15,000,000 Unquoted Options exercisable at \$0.25 on or before 31 December 2019 classified as restricted securities

10,000,000 Class B Performance Shares classified as restricted securities

**ASX Code: TMT** 

FRA Code: TN6

### TMT INVESTOR PRESENTATION AND ROADSHOW

The Board of Technology Metals Australia Limited (ASX: **TMT**) ("**Technology Metals**" or the "**Company**"), is pleased to provide the attached presentation to be given as part of an investor roadshow by the Company. Details of the investor roadshow are as follows.

- Presentation at **Invest in Australian Resources** conference in Frankfurt, Germany on 1 November 2017. The key focus area of the conference is to engage with mining investors, media, financial institutions and brokers who demonstrate an interest in junior resource explorers.
- Attendance at the **International Precious Metals & Commodities Show** in Munich, Germany. This has been taking place in Munich since 2005 and is exclusively dedicated to investments in precious metals and commodities.
- Presentation at **Invest in Australian Resource Dinner Event** in Munich, Germany. This is aimed at the high net worth investment community.

For, and on behalf of, the Board of the Company,

Ian Prentice

**Executive Director** 

- ENDS -

#### About Technology Metals Australia Limited

**Technology Metals Australia Limited (ASX: TMT)** was incorporated on 20 May 2016 for the primary purpose of identifying exploration projects in Australia and overseas with the aim of discovering commercially significant mineral deposits. The Company's primary exploration focus is on the Gabanintha Vanadium Project located 40km south east of Meekatharra in the mid-west region of Western Australia with the aim to develop this project to potentially supply high-quality V2O5 flake product to both the steel market and the emerging vanadium redox battery (VRB) market.

The Project, which consists of five granted tenements and one exploration licence application, is on strike from, and covers the same geological sequence as, Australian Vanadium Limited's (ASX: AVL) Gabanintha Vanadium project. Vanadium mineralisation is hosted by a north west – south east trending layered mafic igneous unit with a distinct magnetic signature. Mineralisation at Gabanintha is similar to the Windimurra Vanadium Deposit, located 270km to the south, and the Barambie Vanadium-Titanium Deposit, located 155km to the south east. The key difference between Gabanintha and these deposits is the consistent presence of the high grade massive vanadium – titanium – magnetite basal unit, which is expected to result in an overall higher grade for the Gabanintha Vanadium Project.

Data from the Company's maiden drilling program was used by independent geological consultants CSA Global to generate a maiden Inferred Resource estimate, reported in accordance with the JORC Code 2012, for the Northern Block of tenements at the Project. The resource estimate confirmed the position of the Gabanintha Vanadium Project as one of the highest grade vanadium projects in the world.

# TECHNOLOGY METALS AUSTRALIA LIMITED

(ASX: TMT; FRA: TN6)

# INVESTOR PRESENTATION NOVEMBER 2017

"A World-Class Vanadium Development Opportunity"

## Important Information



All currency amounts are in AUD\$ unless stated otherwise.

#### Disclaimer

This presentation has been prepared by Technology Metals Australia Limited ("Company"). It does not purport to contain all the information that a prospective investor may require in connection with any potential investment in the Company. You should not treat the contents of this presentation, or any information provided in connection with it, as financial advice, financial product advice or advice relating to legal, taxation or investment matters.

No representation or warranty (whether express or implied) is made by the Company or any of its officers, advisers, agents or employees as to the accuracy, completeness or reasonableness of the information, statements, opinions or matters (express or implied) arising out of, contained in or derived from this presentation or provided in connection with it, or any omission from this presentation, nor as to the attainability of any estimates, forecasts or projections set out in this presentation.

This presentation is provided expressly on the basis that you will carry out your own independent inquiries into the matters contained in the presentation and make your own independent decisions about the affairs, financial position or prospects of the Company. The Company reserves the right to update, amend or supplement the information at any time in its absolute discretion (without incurring any obligation to do so).

Neither the Company, nor its related bodies corporate, officers, their advisers, agents and employees accept any responsibility or liability to you or to any other person or entity arising out of this presentation including pursuant to the general law (whether for negligence, under statute or otherwise), or under the Australian Securities and Investments Commission Act 2001, Corporations Act 2001, Competition and Consumer Act 2010 or any corresponding provision of any Australian state or territory legislation (or the law of any similar legislation in any other jurisdiction), or similar provision under any applicable law. Any such responsibility or liability is, to the maximum extent permitted by law, expressly disclaimed and excluded.

Nothing in this material should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities. It does not include all available information and should not be used in isolation as a basis to invest in the Company.

#### **Future matters**

This presentation contains reference to certain intentions, expectations, future plans, strategy and prospects of the Company.

Those intentions, expectations, future plans, strategy and prospects may or may not be achieved. They are based on certain assumptions, which may not be met or on which views may differ and may be affected by known and unknown risks. The performance and operations of the Company may be influenced by a number of factors, many of which are outside the control of the Company. No representation or warranty, express or implied, is made by the Company, or any of its directors, officers, employees, advisers or agents that any intentions, expectations or plans will be achieved either totally or partially or that any particular rate of return will be achieved.

Given the risks and uncertainties that may cause the Company's actual future results, performance or achievements to be materially different from those expected, planned or intended, recipients should not place undue reliance on these intentions, expectations, future plans, strategy and prospects. The Company does not warrant or represent that the actual results, performance or achievements will be as expected, planned or intended.

#### **Competent Person's Statement**

The information in this presentation that relates to Exploration Results are based on information compiled by Mr Ian Prentice. Mr Prentice is a Director of the Company and a member of the Australian Institute of Mining and Metallurgy. Mr Prentice has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this presentation and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code"). Mr Prentice consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources are based on information compiled by Mr Galen White. Mr White is a Principal Consultant with CSA Global and a Fellow of the Australian Institute of Mining and Metallurgy. Mr White has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this report and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code"). Mr White consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

#### **Exploration Targets**

The terms "Target" or "Exploration Target" where used in this presentation should not be misunderstood or misconstrued as an estimate of a Mineral Resource as defined in the JORC Code and therefore the terms have not been used in this context. Exploration Targets are conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain further exploration will result in the determination of a Mineral Resource.

### **Investment Highlights**



#### "Invest in a World-Class Vanadium Development Opportunity"

Vanadium Market in Deficit; structural change in the industry reducing supply on the cusp of a period of expected dramatic demand increase.

Wholly Owned Gabanintha Vanadium Project; 5.5km strike length of high grade mineralised layered mafic igneous unit.

Maiden Inferred Resource; high grade zone of **29.5Mt at 1.1%**  $V_2O_5$  within an overall 62.8Mt at 0.8%  $V_2O_5$  placing the Project amongst the highest grade deposits in the World. Resource upgrade pending.

**Emerging Developer**; Technology Metals Australia (TMT) A\$7.0 million market capitalisation, EV of A\$5.1 million\* - listed on ASX 21 December 2016 after raising \$4.0 million.

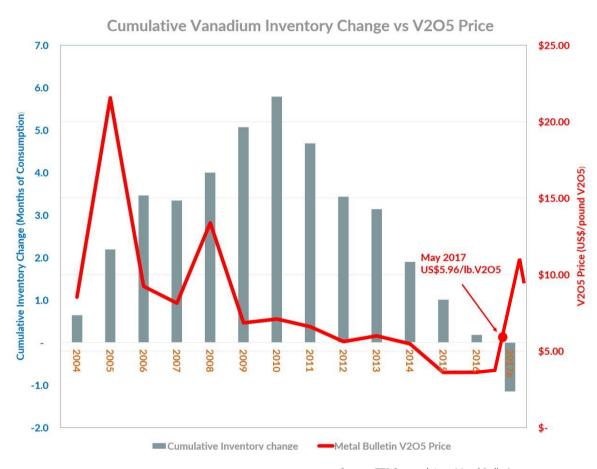
**Global Comparatives;** Largo Resources, Inc. (TSX:LGO market cap CN\$267m) operating Maracas Menchen Mine, Brazil and TNG Limited (ASX:TNG market cap A\$129, EV ~A\$122m) developing Mount Peake vanadium – titanium – iron project in Australia.

<sup>\*</sup> As at 20 October 2017

### Vanadium Market in Deficit



- Structural change in industry has seen consumption outstrip supply for the past five years and inventory is now depleted.
- Industry rationalisation and environmental constraints in China resulting in a dramatic production decline (9,700t deficit forecast in 2017).
- Annual global production was 76,000t in 2016 – as co-product from steel slag (73%), primary ores (17%) and 10% from secondary.
- Emerging primary producers ideally placed to meet increasing demand.

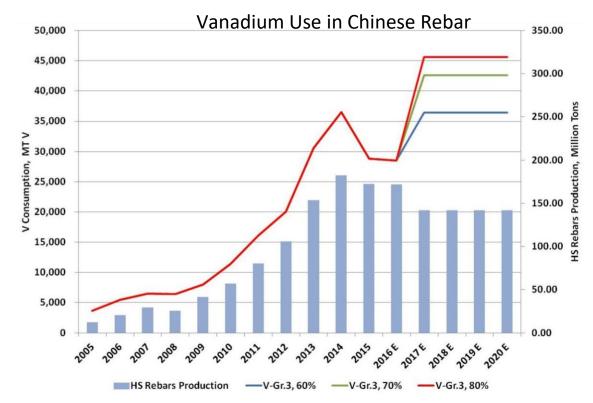


Source: TTP Squared, Inc., Metal Bulletin

# Vanadium Consumption Increasing



- Consumption in 2016 dominated by steel alloys (91%) with energy storage sector at 2%.
- Addition of 0.2% vanadium content increases steel strength up to 100% and reduces weight for the same use by up to 30%.
- Imminent move to Grade 3 quality Chinese Rebar forecast to increase vanadium consumption in China by up to 50% (15,000tpa).
- Consumption expected to increase to 131,000tpa by 2025 (source: Roskill), excluding significant growth in the energy storage (battery) sector.



Source: China Iron & Steel Research Center

### Market Disruptor – VRB's

TECHNOLOGY METALS ALISTRALIA LIMITED

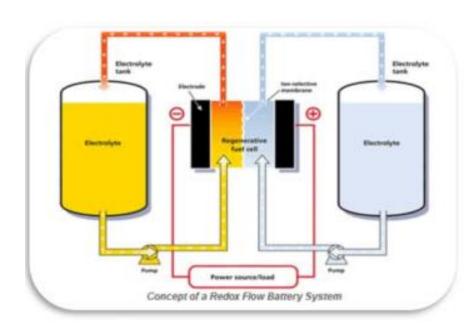
- Vanadium Redox Batteries (VRB's) provide an efficient storage and re-supply solution for renewable energy, suitable for largescale applications.
- VRB's are able to time-shift large amounts of previously generated energy for later use – balancing solar and wind intermittency.
- Vanadium ions in different oxidation states are used to store energy; battery capacity expandable by adding more storage tanks.
- Vanadium deployed in VRB's has grown from 1,000 tonnes to 5,000 tonnes in the past 12 months, with further rapid growth forecast.
- Widespread adoption of VRB's could increase demand for vanadium by 10,000 – 20,000tpa by 2025.
- Rongke Power developing a 200MW/ 800MWh battery in Dalian, China, using ~6,960 tonnes V<sub>2</sub>O<sub>5</sub> (source; Gildermeister Energy Solutions).





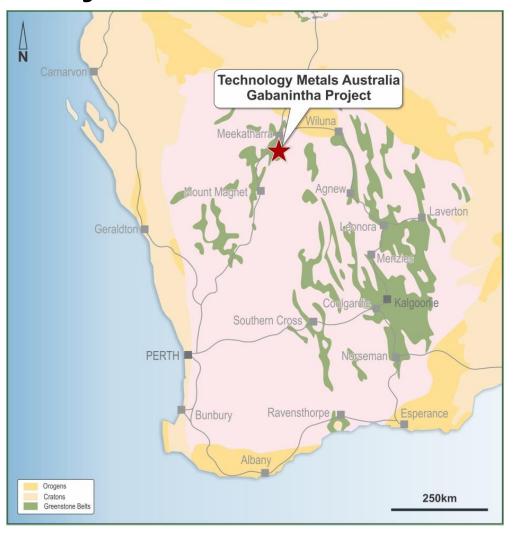
## Advantages of VRB's





- Lifespan of +20 years with very high cycle life (up to 20,000 cycles) and no capacity loss.
- Rapid recharge and discharge, with very fast response time (<70ms).</li>
- Can discharge to 100% with no performance degradation with excellent long term charge retention.
- Only one battery element vanadium is anode and cathode – unique among flow batteries.
- Easily scalable into large MW applications; provide a grid scale solution – peak shaving, regulating load frequency, driving grid efficiency.
- Suitable for micro grids for remote communities, mine sites, islands etc.
- Improved safety (non-flammable) compared to Li-ion batteries.

### **Project Overview**





### Vanadium Project

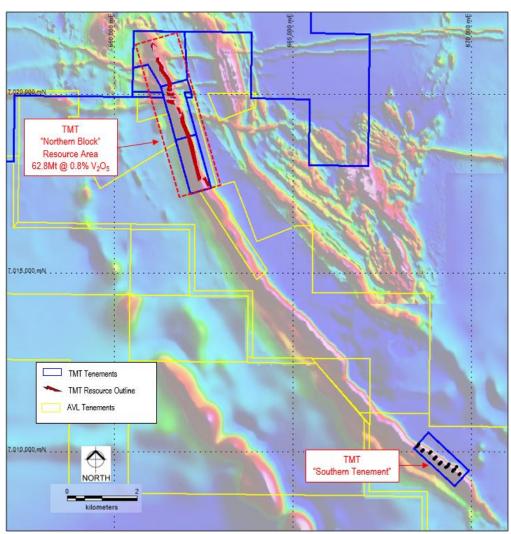
- Located 40km SE of Meekatharra in Western Australia.
- Excellent infrastructure with the Great Northern Highway from Perth passing within 30km of the project.
- Port of Geraldton 500km to the south west accessible via sealed highway.
- Gas pipeline within 150km.



## **Project Setting**

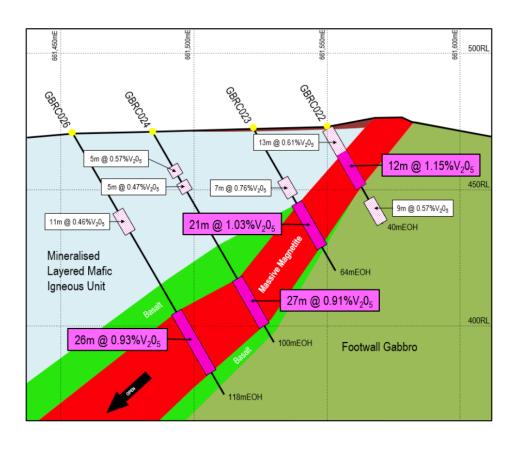


- Mineralisation hosted by a layered mafic igneous unit – magnetite enriched layers host high grade vanadium and titanium.
- Project contains over 5.5km strike length of the mineralised unit – divided in to Northern Block and Southern Tenement.
- Mineralisation extends to surface and outcrops along majority of strike length.
- Resource drilling completed on mix of 100m and 200m line spacing over +3.0km strike in Northern Block.
- Initial drilling completed on Southern Tenement that contains 1.5km strike of outcropping ironstone.



## **Geological Control**





Section 0400N – Wide High Grade Mineralisation with Thickening of the Massive Magnetite Zone

- Broad continuous high grade basal zone (massive magnetite) overlain by multiple medium grade zones.
- Geological (visual) control on high grade basal mineralised zone.
- Drilling confirms excellent continuity of width and tenor of basal mineralised zone intercepts such as 16m at 1.24% V<sub>2</sub>O<sub>5</sub> and 36m at 0.95% V<sub>2</sub>O<sub>5</sub>.
- Wide zones of medium grade hanging wall mineralisation defined directly above the high grade basal zone.
- High grade mineralisation extended down dip to in excess of 150m vertical.
- Geometry of mineralisation expected to have a materially positive impact on project economics.





- Exceptional high grade resource<sup>1</sup> of 29.5Mt at 1.1% V<sub>2</sub>O<sub>5</sub> and 12.6% TiO<sub>2</sub> within consistent, continuous basal massive magnetite zone.
- Project sits comfortably amongst the highest grade vanadium deposits in the World.
- Overall maiden resource of **62.8Mt at 0.8%**  $V_2O_5$  and **9.7%**  $TiO_2$  well on the way to achieving the Company's initial Exploration Target of 80 100Mt at 0.8 to 1.0%  $V_2O_5$ .
- Resource infill and extensional drilling program completed, including diamond drilling for advanced metallurgical testwork, resource upgrade underway.
- Preliminary metallurgical testwork delivers outstanding recoveries in to a magnetic concentrate with very low combined grade of potential contaminants.

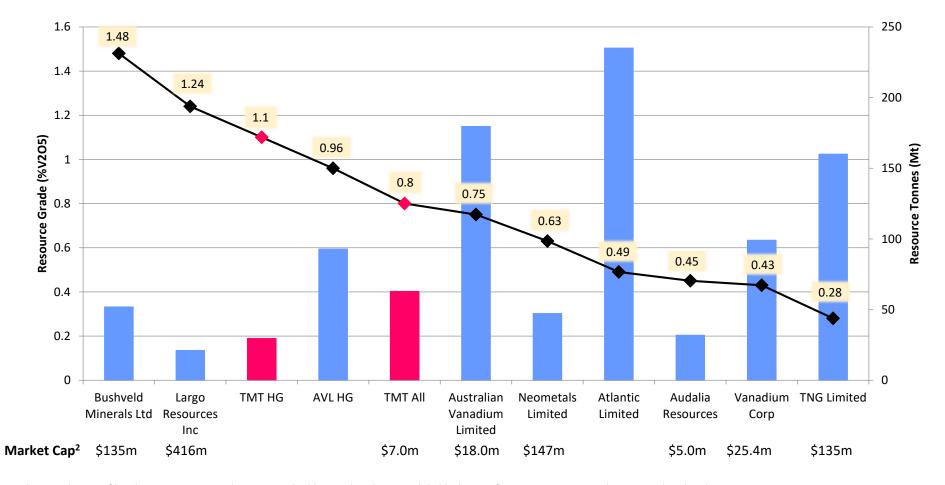
| Mineral Resource estimate for Technology Metals Gabanintha Vanadium Project as at 12 Jun 2017 |                |                |       |      |        |       |       |      |              |
|---|----------------|----------------|-------|------|--------|-------|-------|------|--------------|
| Mineralised Zone  | Classification | Million Tonnes | V205% | Fe%  | Al2O3% | SiO2% | TiO2% | LOI% | Density t/m3 |
| Basal massive magnetite   | Inferred       | 29.5           | 1.1   | 46.4 | 6.1    | 8.2   | 12.6  | 1    | 3.6          |
| Hanging wall disseminated   | Inferred       | 33.2           | 0.5   | 26.6 | 14.9   | 27.1  | 7.2   | 5.1  | 2.4          |
| Combined Total  | Inferred       | 62.8           | 0.8   | 35.9 | 10.8   | 18.3  | 9.7   | 3.2  | 2.8          |

<sup>\*</sup> Note: The Mineral Resource was estimated within constraining wireframe solids using a nominal 0.9% V2O5 lower cut off for the basal massive magnetite zone and using a nominal 0.4% V2O5 lower cut off for the hanging wall disseminated mineralisation zones. The Mineral Resource is quoted from all classified blocks within these wireframe solids above a lower cut-off grade of 0.4% V2O5. Differences may occur due to rounding.

<sup>1 -</sup> Refer TMT ASX announcement dated 13 June 2017 for full details of the inferred mineral resource estimation.

# Global Vanadium Projects (ex China)

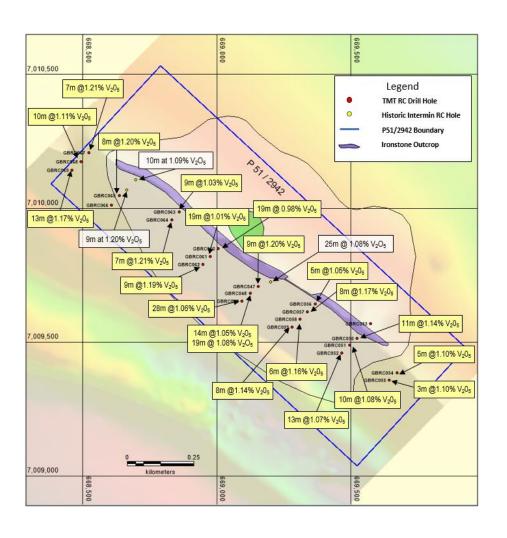
#### **GRADE IS KEY**



<sup>2 -</sup> Market capitalisation of listed entities as at 20 October 2017. Bushveld Minerals and Neometals hold other significant resource assets. Atlantic Limited not listed.

### Southern Tenement





- Outstanding results from initial RC drilling completed on 200m line spacing along ~1.5km of outcropping ironstone.
- High grade basal zone intersected on every traverse – intercepts such as 28m at 1.06% V<sub>2</sub>O<sub>5</sub> and 11m at 1.14% V<sub>2</sub>O<sub>5</sub>.
- Broad hanging wall mineralisation directly above basal zone deliver combined intersections of up to 52m at 0.89% V<sub>2</sub>O<sub>5</sub>.
- Down dip continuity of high grade mineralisation defined to in excess of 125m vertical.
- Expected to add material tonnage to overall project resource.





"Aggressive development timeline post listing; momentum to be maintained"

#### September 2017 December 2017

Maiden resource Commencement of Infill and extension for Southern scoping / prefeasibility drilling program **Tenement** study (December Quarter) completed (December quarter) (mid September 2017) **Updated Northern** Detailed metallurgical Block resource testwork commenced. (mid October 2017) estimate (December quarter)

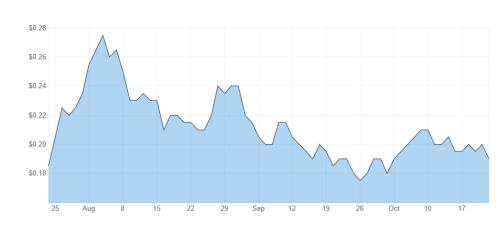




| Company Snapshot                   |        |  |  |  |
|------------------------------------|--------|--|--|--|
| ASX Code                           | TMT    |  |  |  |
| Cash as at 30 September 2017       | \$1.9m |  |  |  |
| Market Cap (as at 20 October 2017) | \$7.0m |  |  |  |
| Shares on issue                    | 35.1m  |  |  |  |
| Options (\$0.25 – 31/12/19 expiry) | 15m    |  |  |  |
| Performance Shares B               | 10m    |  |  |  |
| Enterprise Value                   | \$5.1m |  |  |  |

| Top Shareholders                |       |
|---------------------------------|-------|
| Twentieth Century Motor Company | 26.4% |
| Station Nominees PL             | 8.90% |
| Muncha Cruncha PL               | 2.76% |
|                                 |       |
| Top 20 Shareholders             | 55.0% |





"A company that provides multi-megawatt energy storage solutions using vanadium redox fuel cells. That's one of the coolest things I've ever said out loud!"

#### - President Obama

# Company Board and Management





Michael Fry Non-Executive Chairman

Michael Fry holds a Bachelor of Commerce degree from the University of Western Australia, is a Fellow of the Financial Services Institute of Australasia, and is a past member of the Australian Stock Exchange.

Mr Fry has extensive corporate and commercial experience, financial and capital market knowledge and a background in corporate treasury management.



Executive Director

Mr Prentice is a Member of the Australasian Institute of Mining and Metallurgy and holds a Bachelor of Science (Geology) from the University of Western Australia.

Mr Prentice has served as a Director for a number of ASX-listed resource companies, with activities ranging from exploration and project acquisition in Asia and Africa through to gold production in Australia.



Sonu Cheema
Non-Executive Director and Company
Secretary

Mr Cheema has completed a Bachelor of Commerce majoring in Accounting at Curtin University and is a member of CPA Australia.

Mr Cheema holds the position of Accountant and Company Secretary for Cicero Corporate Services and has over 10 years' experience working with public and private companies in Australia and abroad.

### Summary

**Experienced Board / Management** team focused on delivering shareholder returns.

Minimal geological / resource risk with recent drilling confirming that the Project is amongst the highest grade deposits in the World; resource upgrade underway.

Well placed to take advantage of structural change in the industry with expected demand growth in a reducing supply environment.

**Stable, well resourced** Western World mining environment to support project development, with excellent infrastructure and access to services.

**Team in place** to progress the project through development phases as well as identify and evaluate opportunities in a wide range of technology metals.



